

REMARKS

A. Background

Claims 37-45, 47-52, 54-59, 61-66, 68-73 and 75-97 were pending in the application at the time of the Office Action. Claims 37-45, 47-52, 54-59, 61-66, 68-73 and 75-97 were rejected as being obvious over cited art. By this response Applicant has cancelled claims 47, 54, 61, 68, and 75; and amended claims 37, 48, 49, 55, 56, 62, 63, 69, 70, 76, 77, 80, 83, 86, 89, 92, and 95. As such, claims 37-45, 48-52, 55-59, 62-66, 69-73 and 76-97 are presented for the Examiner's consideration in light of the following remarks.

B. Proposed Amendments

Applicant has herein amended claims 37, 48, 49, 55, 56, 62, 63, 69, 70, 76, 77, 80, 83, 86, 89, 92, and 95 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a notice of allowance. For example, independent claims 37, 49, 56, 63, 70, have been amended to respectively incorporate the limitations of claims 47, 54, 61, 68, 75, which previously depended therefrom. Furthermore, independent claims 37, 49, 56, 63, 70, 77, 80, 83, 86, 89, 92, and 95 have been amended to recite "the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm," and "the polarization maintaining fiber coupled to the first laser" (or second laser, depending on the claim) "has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the first laser" (or second laser, depending on the claim) "and the fiber Bragg grating are configured as a resonator structure." Claims 48, 55, 62, 69, and 76 have been amended to address formal matters. Applicant submits that the amendments to the claims are supported by prior pending claim language and by the application as originally filed. In view of the

foregoing, Applicant respectfully submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

C. Rejections based on 35 USC § 103

Paragraphs 2-48 of the Office Action reject claims 37-45, 47, 49, 50-54, 56-59, 61, 63-66, 68, 70-73, 75, and 77-97 under 35 USC § 103(a) as being unpatentable over U.S. Application No. 2004/0027648 to Furukawa et al. (“*Furukawa*”) in view of U.S. Patent No. 5,796,764 to Corsini et al. (“*Corsini*”). Inasmuch as claims 47, 54, 61, 68, and 75 have been canceled herein, the rejection of those claims has been rendered moot. Regarding the rest of the rejected claims, claims 37, 49, 56, 63, 70, 77, 80, 83, 86, 89, 92, and 95 are independent claims. Applicant respectfully traverses this rejection and submits that the allegedly obvious combination would not include all of the limitations recited in the rejected claims.

As noted above, all of the pending independent claims (claims 37, 49, 56, 63, 70, 77, 80, 83, 86, 89, 92, and 95) have been amended herein to recite that the polarization maintaining fiber coupled to the first or second laser, depending on the claim, “has a fiber Bragg grating with a full width of half maximum of 0.5 or less,” and the first or second laser, depending on the claim, and the fiber Bragg grating “are configured as a resonator structure.” In contrast, *Furukawa* and *Corsini* teach laser light sources that are constructed using external resonators. In the present invention, the first and second lasers oscillate independently and outputs of the two lasers are multiplexed. Then, the nonlinear optical crystal outputs a coherent beam having a stable power.

Also as noted above, all of the pending independent claims (claims 37, 49, 56, 63, 70, 77, 80, 83, 86, 89, 92, and 95) have been amended herein to recite that “the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 - 60 mm.” Applicant

respectfully submits that none of the cited references teach or suggest this added limitation of the independent claims.

In view of the foregoing discussion, Applicant submits that a *prima facie* case of obviousness has not been established at least because the allegedly obvious combination of *Furukawa* and *Corsini* would not include all of the limitations recited in the rejected claims. Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 37, 49, 56, 63, 70, 77, 80, 83, 86, 89, 92, and 95 be withdrawn

Claims 38-45, 50-52, 57-59, 64-66, 71-73, 78, 79, 81, 82, 84, 85, 87, 88, 90, 91, 93, 94, 96, and 97 variously depend from claims 37, 49, 56, 63, 70, 77, 80, 83, 86, 89, 92, and 95 and thus incorporate the limitations thereof. As such, Applicant submits that claims 38-45, 50-52, 57-59, 64-66, 71-73, 78, 79, 81, 82, 84, 85, 87, 88, 90, 91, 93, 94, 96, and 97 are distinguished over the cited art for at least the same reasons as discussed above with regard to claims 37, 49, 56, 63, 70, 77, 80, 83, 86, 89, 92, and 95. Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 38-45, 50-52, 57-59, 64-66, 71-73, 78, 79, 81, 82, 84, 85, 87, 88, 90, 91, 93, 94, 96, and 97 also be withdrawn.

Paragraphs 49-54 of the Office Action reject claims 48, 55, 62, 69 and 76 under 35 USC § 103(a) as being unpatentable over the *Furukawa/Corsini* combination, discussed above, further in view of U.S. Patent No. 5,012,478 to Hattori et al. (“*Hattori*”). *Hattori* is merely cited for allegedly teaching specific front and rear facet reflectances. Applicant respectfully traverses this rejection.

Claims 48, 55, 62, 69 and 76 respectively depend from claims 37, 49, 56, 63, and 70 and thus incorporate the limitations thereof. As such, even if, *arguendo*, it would have been obvious to combine *Furukawa/Corsini* with the aforementioned teachings of *Hattori* in the allegedly obvious manner set forth in the Office Action, the resulting combination would still not cure the deficiencies of

Furukawa/Corsini with regard to claims 37, 49, 56, 63, and 70. As such, Applicant submits that claims 48, 55, 62, 69 and 76 are distinguished over the cited art for at least the same reasons as discussed above with regard to claims 37, 49, 56, 63, and 70. Accordingly, Applicant respectfully requests that the obviousness rejection with regard to claim 48, 55, 62, 69 and 76 be withdrawn.

No other objections or rejections are set forth in the Office Action.

D. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 37-45, 48-52, 55-59, 62-66, 69-73 and 76-97 as amended and presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 19th day of February 2008.

Respectfully submitted,

/Scott A. Woodbury/ Reg. #55743

SCOTT A. WOODBURY

Registration 55,743

DANA L. TANGREN

Registration No. 37,246

Attorneys for Applicant

Customer No. 022913

Telephone No. 801.533.9800

SAW:cad

W:\14321\69\CAD0000002627V001.DOC